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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/749,012

12/30/2003

Donald A. Kerth

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05/16/2006

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EXAMINER

VUONG, QUOCHIE B

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 05/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/749,012	Applicant(s) KERTH ET AL.	
	Examiner Quochien B. Vuong	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 15 is/are rejected.
- 7) ☐ Claim(s) 3-14 and 16-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 3-8 and 16-21 are objected to because of the following informalities: claims 3-8 and 16-21 lacking a period "." at the end of each claims. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
4. Claims 1, 2, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (US 5,818,543).

Regarding claim 1, Lee disclose a method for improving signal quality within a radio frequency (RF) receiver and the RF receiver (figure 1), the method and the RF receiver comprising: down-converting an image of a desired signal to a baseband signal (using mixer 34, and baseband demodulator 42) (column 4, lines 45-67); determining noise of the baseband signal; in response to a determination that the noise of the baseband signal being equal to or greater than a predetermined threshold, swapping IF for an incoming signal (column 5, lines 44-52, when the level of noise exceeds a predetermined threshold, swap or switch to a different antenna, therefore, swap to another signal and eventually swap to another IF signal); and in response to a determination that the noise of said baseband signal being less than the predetermined threshold, maintaining IF for an incoming signal (column 5, lines 1-13, and 44-52). Lee does not specifically disclose the noise in baseband is an image of the desired signal. However, examiner takes Official notice that it is well known in the art for the noise to include the image of the desired signal. Therefore, it would have been obvious for the method and RF receiver of Lee to adapt the image instead of the noise as one would like to select in order to monitoring the image of the desired signal as an alternative of monitoring the noise level.

Regarding claim 2, Lee discloses the method further includes continuing normal signal processing (column 4, lines 59-67).

Allowable Subject Matter

5. Claims 3-14 and 16-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 3, 6, 9, 12 and 16, , 19, 22, 25, Lee disclose the method and the RF receiver of claims 1 and 15 above, respectively. However, Lee and the cited prior art fail to teach or fairly suggest the method and the RF receiver as described above wherein the down-converting is performed as specified in the claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hayashihara (US 5,517,689) discloses phase detecting method and phase detector and FM receiver using phase detecting method.

Tatsuta et al. (US 5,712,879) disclose differential detecting device.

Ohta et al. (US 6,101,226) disclose radio receiving apparatus for receiving communication signals of different bandwidths.

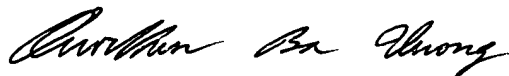
Lakkis (US 6,694,131) discloses method and apparatus for adaptive image rejection.

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7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B. Vuong whose telephone number is (571) 272-7902. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



QUOCHIE B. VUONG
PRIMARY EXAMINER

Quochien B. Vuong
May 112, 2006.